

usbLOGiC USB-AV-Player

USB-MK-AUX

**for BMW Professional navigation systems
without iDrive (MK2-MK4)**

Product features

- USB-port for media up to 2 TB (2000GB)
- supports FAT32 and NTFS formatted media
- multi partition capable
- compatible with MP3, AVI, VOB, MOV, RMVB, JPG and many more
- last position memory
- integrated into and controllable by vehicle infotainment
- AV-input with IR-control channel
- control of after-market devices by OEM buttons, e.g. DVD-player, USB/iPod devices, ...
- after-market rear-view camera input
- automatic switching to rear-view camera input
- rear-view camera power (+12V max 1A)
- rear-seat-entertainment AV-output
- optional remote control for full USB functions/rear-seat-entertainment
- power on remote out trigger signal (+12V max 1A) to switch on connected devices
- video-in-motion

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Legal Information

By law, watching moving pictures while driving is prohibited, the driver must not be distracted. We do not accept any liability for material damage or personal injury resulting, directly or indirectly, from installation or operation of this product. This product should only be used while standing or to display fixed menus or rear-view-camera video when the vehicle is moving, for example the MP3 menu for DVD upgrades.

Changes/updates of the vehicle's software can cause malfunctions of the interface. We offer free software-updates for our interfaces for one year after purchase. To receive a free update, the interface must be sent in at own cost. Labor cost for and other expenses involved with the software-updates will not be refunded.

1. Prior to installation

Read the manual prior to installation. Technical knowledge is necessary for installation. The place of installation must be free of moisture and away from heat sources.

1.1. Delivery contents

Take down the SW-version and HW-version of the interface boxes, and store this manual for support purposes.



If remote function for a peripheral device shall be used, additional an IR-Remote cable and Y-adapter are needed, see chapter [AV-source](#) .

1.2. Check compatibility of vehicle and accessories

Requirements

Vehicle 3series (E46), 5series (E39), 7series (E38), X5 (E53), X3 (E83), Z4 (E85/86)

with AUX-input at the radio module (from approx 10/2002)

Navigation Navigation system Professional without iDrive (MK2-MK4)

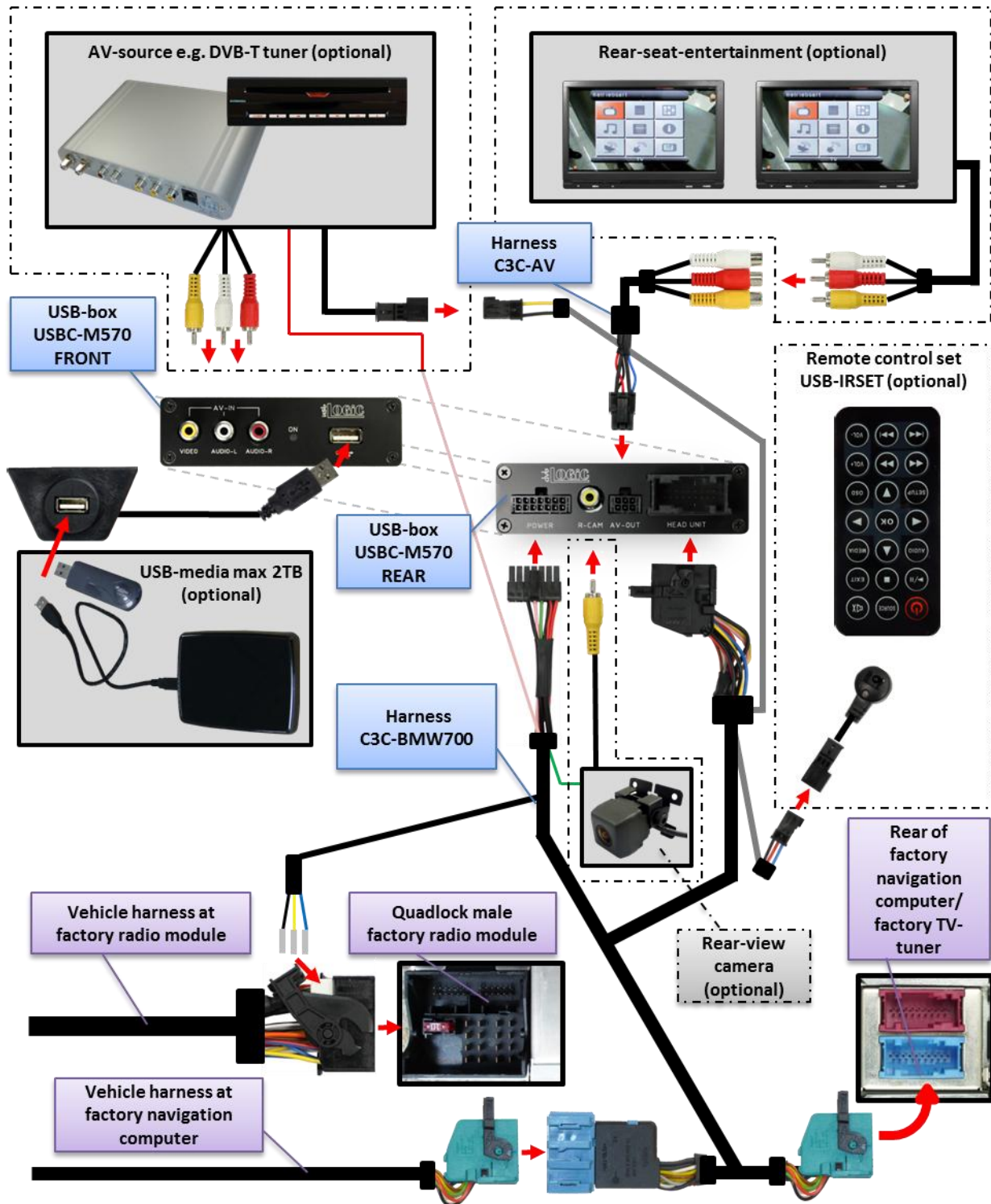
Limitations

Factory-audio-AUX-input The factory audio-AUX-input is used for audio-insertion by the dvbLOGiC. Alternative use of the AUX-input is only possible by additional switch-box integration.

USB-port Only for media which work with power supply by ONE single USB connector.

After-market rear-view camera Compatible with NTSC-cameras only.

2. Connection schema



3. Installation

Switch off ignition and disconnect the vehicle's battery! If according to factory rules disconnecting the battery has to be avoided, it is usually sufficient to put the vehicle in sleep-mode. In case the sleep-mode does not show success, disconnect the battery with a resistor lead.

Place of installation is at the navigation computer or the factory TV-tuner (if existing and not removed) and at the radio module.

If there is a factory TV-tuner inside the car, you have to connect the harness C3C-BMW700 to the TV-tuner and not to the navigation computer!

The radio module and navigation computer are located at the rear end for the **3series (E46)**, **5series (E39)** and **7series (E38)** on the left hand side the radio module of the 7series is located behind lining in the car wing).

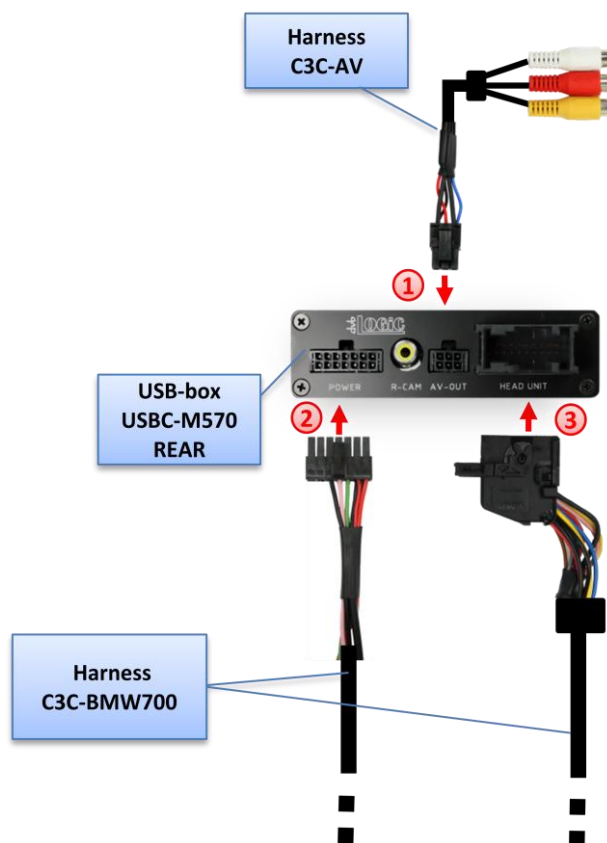
The **X5 (E53)** radio module is located underneath the boot lining, next to the battery.



The navigation computer is located on the left hand side behind the boot lining.

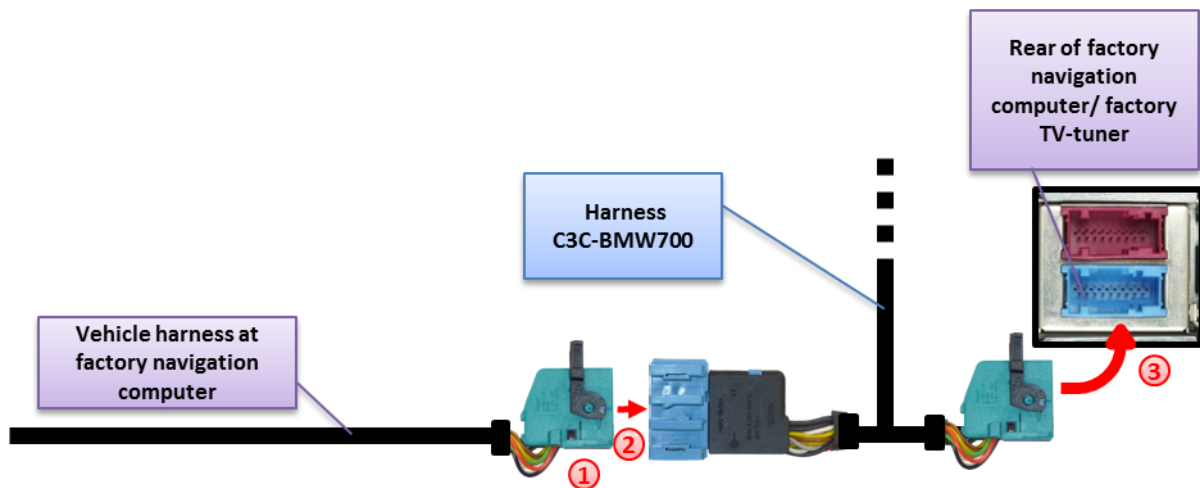


3.1. Interconnecting USB-box and harnesses



- ① Plug harness C3C-AV into 6pin Molex of USB-box USBC-M570.
- ② Plug harness C3C-BMW700 into 14pin of USB-box USBC-M570.
- ③ Plug female 18pin AMP connector of C3C-BMW700 into male 18pin AMP connector of USB-box USBC-M570.

3.2. Connections to the navigation computer or – if existing – to the TV-tuner

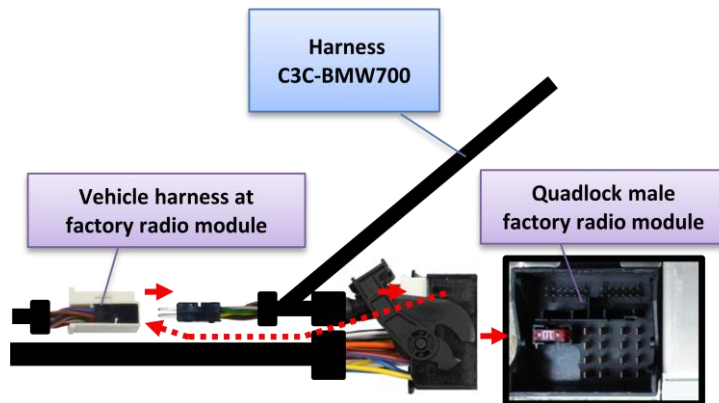


If there is a factory TV-tuner inside the car, you have to connect the harness C3C-BMW700 to the TV-tuner and not to the navigation computer!

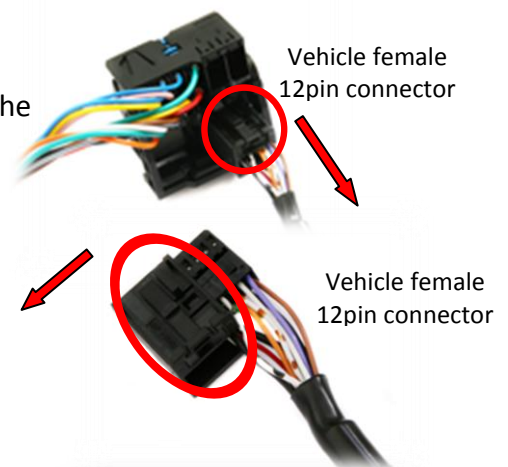
- ① Disconnect blue female 18pin connector of vehicle harness from the back of the navigation computer or the factory TV-tuner (if existing and not removed).
- ② Plug blue male 18pin AMP connector of harness C3C-BMW700 into blue female 18pin AMP connector of vehicle harness.
- ③ Plug blue female 18pin AMP connector of harness C3C-BMW700 into blue male 18pin AMP connector of navigation computer or of the factory TV-tuner (if existing and not removed).

Note: If an existing factory TV-tuner will be removed the optionally available harness CAB-BMW200 is necessary!

3.3. Connections to radio module



Loosen the female Quadlock connector to the radio module.
Loosen the black female 12pin connector from chamber B of the female Quadlock connector.

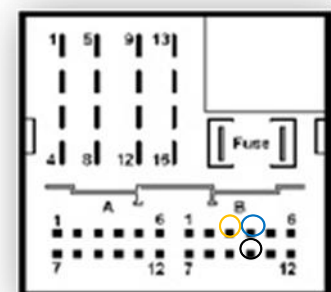


Push the insert from female 12pin connector's plastic cab from the side.

Pin the audio cables of harness C3C-BMW700 to the disassembled vehicle's female 12pin connector:

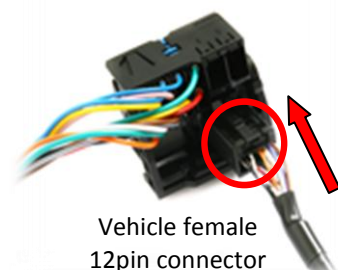
Yellow cable	Pin 3
Blue cable	Pin 4
Black cable	Pin 10

If the chambers of the female 12pin connector are occupied, isolate and remove the existing pins.



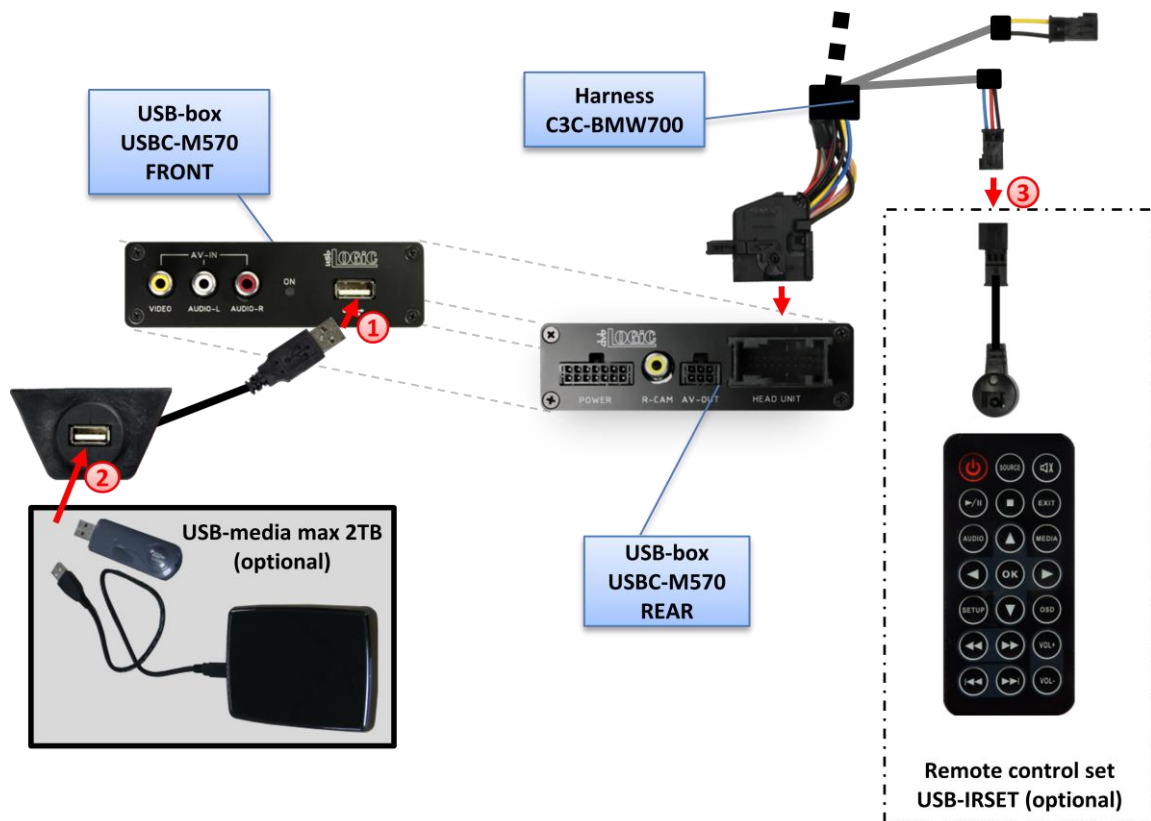
Quadlock Steckplatz Radiomodul

Push the black plastic cap onto the female 12pin connector and insert it into the female Quadlock connector. Reconnect the female Quadlock connector to the radio module.



Vehicle female 12pin connector

3.4. USB and optional IR-remote control set



- ① Connect USB-connector of USB-installation socket USBC-EXT to USB-socket of USB-box USBC-M570 and install the USBC-EXT socket in a well accessible location, e.g. the glove-box. Make sure there is enough space to load USB-media.
- ② Installation socket for the connection of USB-media.
- ③ The USB-IRSET consists of the external C3C-SENSOR IR-sensor and the USBC-RC IR-remote control and can be used to control the usbLOGiC's internal USB functions additionally to the control through the navigations buttons. Connect the C3C-SENSOR to the female black/red/blue 3pin AMP connector of harness C3C-BMW700 and locate the sensor in an accessible place.

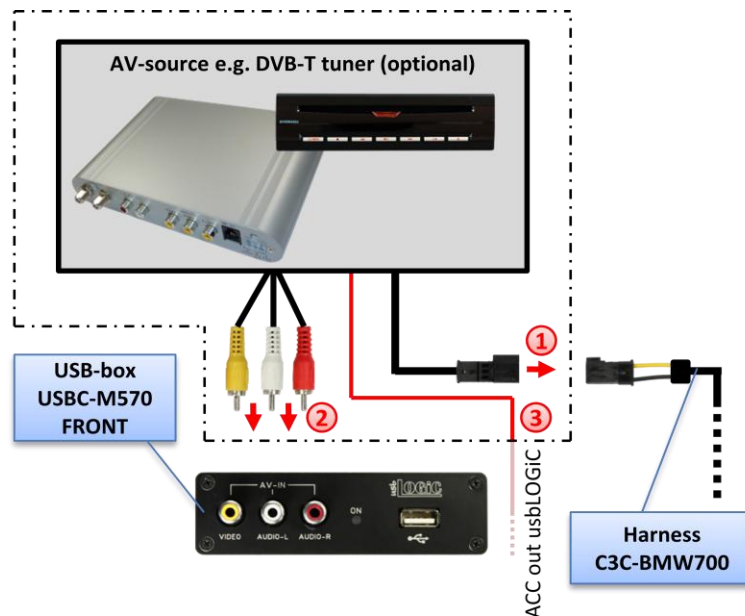
3.5. Connecting peripheral devices

It is possible to connect an after-market AV-source, after-market rear-view camera and rear-seat-entertainment to the usbLOGiC.

Before final installation of the peripheral devices, we recommend to test-run the usbLOGiC functions to detect incompatibility of vehicle, navigation, factory accessories or peripheral devices as soon as possible.

3.5.1. AV-source

The usbLOGiC has the possibility to connect and remotely control by navigation buttons a pre-programmed device. The device list in the device control table shows the pre-programmed remote channels and the related IR-remote cables STA-xxx which must be ordered separately for the control of the device.

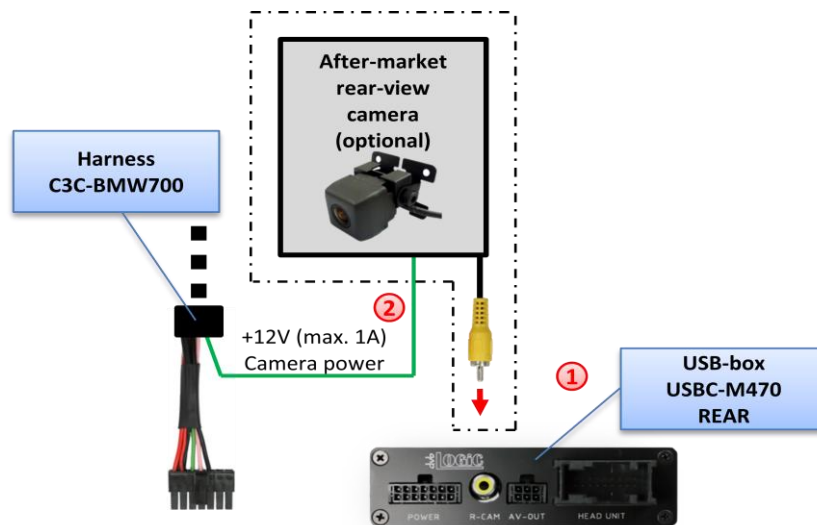


- ① Using the respective STA-xxx IR-control cable, interconnect the yellow female 3pin AMP connector of harness C3C-BMW700 and the IR-port of the AV-source.
- ② Using an RCA-cable, interconnect the female RCA-port AV1 of the USB-box USBC-M570 with the AV-output of the AV-source.
- ③ The pink ACC-output wire (+12V max. 1A) of harness C3C-BMW700 can be connected to the ACC-input wires of the connected device to switch it on. It carries +12V when the navigation computer is running.

3.5.2. Installing AV-source's IR-sensor additionally

Additionally to the control via OEM navigation, it is possible to install the original IR-sensor of a connected device. By using the respective Y-adapter (e.g. STA-Y35MM or STA-RJ12) for the IR-Port of the connected device, the controls of navigation AND device's IR-sensor can be connected and used simultaneously. Installation of the IR-sensor is recommended as the controls via navigation are limited, and not all functions may be covered.

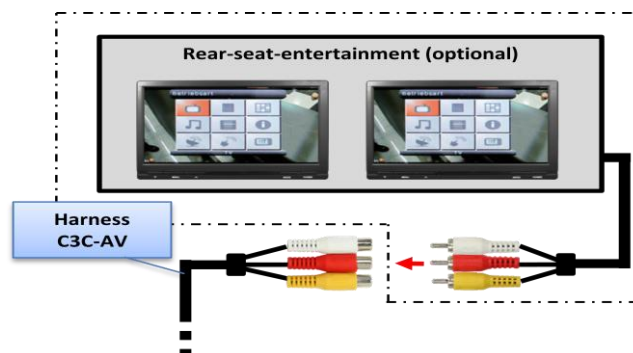
3.5.3. After-market rear-view camera



- ① Connect the video RCA of the after-market rear-view camera to the female RCA connector R-CAM IN of USB-box USBC-M570.
- ② Connect the green wire of C3C-BMW700 to the camera power supply (+12V max. 1A). The green wire is high (+12V) when reverse gear is engaged.

Note: Compatible with NTSC cameras only.

3.5.4. After-market rear-seat-entertainment



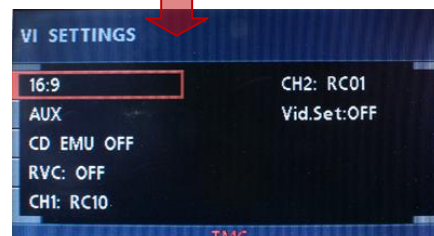
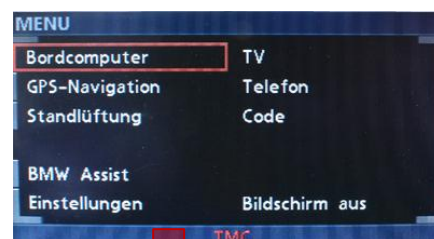
- ① Using RCA-cables, connect the rear-seat-entertainment to the female RCA-connector VIDEO OUT of USB-box USBC-M570.

Note: As the output is a full output, not shared with the video signal for the navigation system, splitting the video with an RCA Y-cable might give a good enough picture for two rear-seat-entertainment monitors. If not, or if connecting more than two monitors, use a video splitter.

3.6. System settings/VI SETTINGS

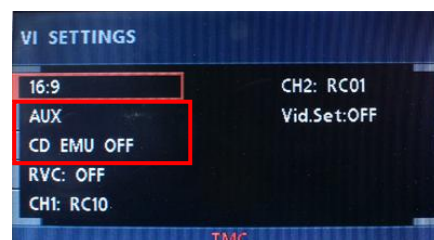
You must make some settings in the "VI SETTINGS" menu to enable the usbLOGiC's functions.

Press 3x the "MENU" key to access the "VI SETTINGS" menu of the usbLOGiC.
Use the right knob to make changes within the "VI SETTINGS" menu.
Press 1x the "MENU" key to exit the "VI SETTINGS" menu.



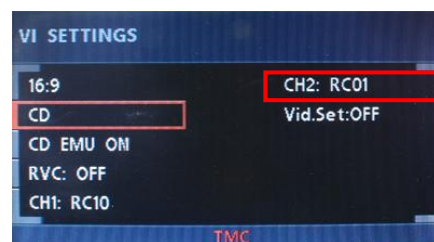
3.6.1. Audio settings

It is necessary to set the audio settings to "AUX" and "CD EMU OFF" to use the usbLOGiC.



3.6.2. Assigning device control for connected AV-source

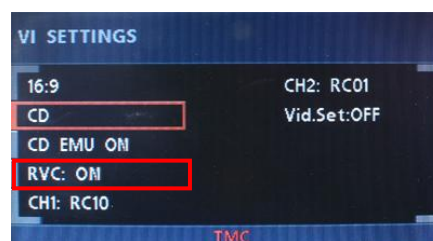
Select control levels setup "CH2: RCxx" in the "VI SETTINGS" menu and assign related IR-code as described in device control table by turning the right knob.



3.6.3. Rear-view camera function

Set the rear-view camera setting to "RVC: ON" to use the rear-view camera input of the usbLOGiC. After the setting the automatic switching to rear-view camera input is activated when reverse gear is engaged.

Note: After the reverse gear is disengaged, the monitor stays on camera video until the vehicle reaches a speed of 10 km/h. To leave the camera video press the right knob.



4. Operation

4.1. Activation of the video-in-motion function

The video-in-motion function is permanently active without disturbing the navigation performance.

4.2. Selecting the usbLOGiC as current AV-source

Selecting the usbLOGiC as current AV-source is activated by pressing the "MODE"-button (depending on the current mode of the system, it has to be pressed several times). After the first activation the system will switch the picture after a few seconds from usbLOGiC-video to factory-video by itself, the audio will still stay on usbLOGiC-audio. Use the picture switch button to select between factory-video and usbLOGiC-video. You can leave the usbLOGiC mode by pressing the "FM" or the "MODE" button.



MODE - button picture switch button

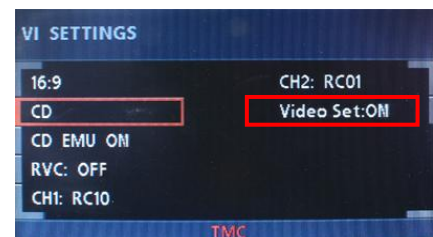
Note: The IR-control channel is preset to RC-Code 09 for the optional USB-AV-port (DVBU).

4.3. Switching to internal USB and AV-source

In usbLOGiC mode longpress station button „1" to switch to the internal DVB-T tuner or longpress station button "2" to switch to the AV-input mode.

4.4. Picture settings

The usbLOGiC has its own picture setting mode. In order to enter this mode, set to "Video Set:ON" in the "VI SETTINGS" menu. After switching to the Video/Audio level the keys "1 <> 4", "2 <> 5", "3 <> 6" can be used for picture settings. (each with short keypress).



You can deactivate the picture setting mode in the "VI SETTINGS" or by turning off ignition.



4.5. Button assignment table

The button assignment table shows which functions of usbLOGiC and additionally connected devices can be executed by station buttons. Once USB or AV-input mode is activated, the navigation button in the left column will execute the function described in the corresponding device column. The function description equals the remote control buttons of the optional usbLOGiC remote control or the additional device. On the additional device the writing may vary (e.g. AV instead of Source).



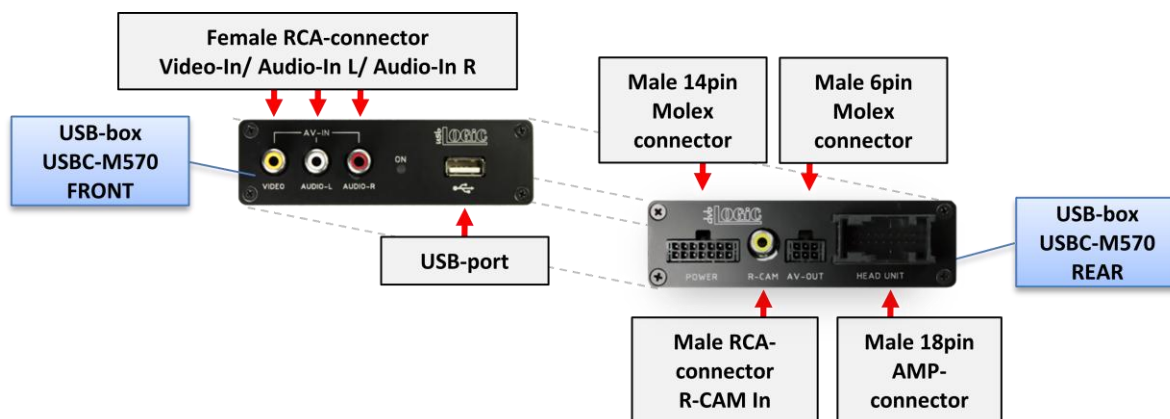
Button assignment table usbLOGiC USB-MK-AUX						
Station button	Internal USB	DVB-T tuners	DVD-player	DVD-changer	iPod®-control	Analog-tuner
1	SOURCE		AV	AV	AV	Display
1 long	Selection TV/ image format	Selection TV/ image format	Selection TV/ image format	Selection TV/ image format	Selection TV/ image format	Selection TV/ image format
2	OK / PLAY		PLAY	PLAY	PLAY	SCAN
2 long	Selection AV2/ Image format	Selection AV2/ Image format	Selection AV2/ Image format	Selection AV2/ Image format	Selection AV2/ Image format	Selection AV2/ Image format
3	←	←	←	←	←	CH -
3 long	EXIT	TEXT	ZOOM	ZOOM		
4	POWER		POWER	POWER	POWER	POWER
4 long	Interface On/Off	Interface On/Off	Interface On/Off	Interface On/Off	Interface On/Off	Interface On/Off
5	MEDIA	EXIT	>>	>>	>>	MUTE
5 long	VOL +	SCAN	PBC	PBC		
6	→	→	→	→	→	CH +
6 long	VOL -	EPG	STOP	STOP		
7	↑	↑	↑	↑	↑	VOL +
8	OK / PLAY	OK	PLAY	PLAY	PLAY/ENTER	SCAN
8 long	SETUP	MENU	SETUP	SETUP	LAMP	ADJUST
9	↓	↓	↓	↓	↓	VOL -
10	TRACK -	CH -	TRACK -	TRACK -	TRACK -	CH -
10 long				DISC		
11	TRACK +	CH +	TRACK +	TRACK +	TRACK +	CH +
11 long				DISC		
12			TITLE	TITLE		
12 long			SUBTITLE	SUBTITLE		
13		INFO	DISPLAY	DISPLAY		
13 long		DTV/RADIO	AUDIO	AUDIO		

5. Specifications

Operation voltage	10.5 – 14.8V DC
Stand-by power drain	<1mA
Operation power drain	~ 500mA
Power consumption	~ 6W
Power rating USB-port	0,5A permanent (0,8A max)
Temperature range	-30°C to +80°C
Weight	312g
Measurements (box only) B x H x T	135 x 30 x 105 mm

CE $\equiv$ 12V DC

6. Connections (USB-box)



7. Technical Support

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